REMARKS

This is in full and timely response to the non-final Official Action of December 7, 2007. Reexamination in light of the following remarks is respectfully requested. No new matter has been added. Claims 1-17 are currently pending in this application, with claims 1, 7 and 10 being independent.

I. Objection to the Drawings

Figures 1, 2 are objected to because they were not designated by a legend such as -- Prior Art --.

By the foregoing amendment, the figures have been amended in order to overcome the objection. Therefore, withdrawal of the objection is respectfully requested.

II. Claim Rejections – 35 U.S.C. §102

Claims 1-11 are rejected under 35 U.S.C. 102 (b) as being anticipated by KRAKER (U.S 4,860,238). The rejection is respectfully traversed for at least the reasons set forth below.

1. Claim 1

Claim 1 is directed to waveform generating apparatus adapted for generating a periodical waveform on the basis of an inputted feature quantity, the waveform generating apparatus including: detecting means for detecting the inputted feature quantity; oscillating means for computing at least two values of the periodical waveform at sample points on the basis of the feature quantity detected by the detecting means, and assigning the at least two values as initial values to terms of a trinomial recurrence formula to thereby generate the periodical waveform

based on the trinomial recurrence formula; and output means for outputting the periodical waveform generated from the oscillating means.

KARAKER arguably discloses a digital sine generator. However, KARAKER does not disclose at least two values of the periodical waveform at sample points are calculated on the basis of the feature quantity. That is, although KARAKER arguably discloses that the values u1 and u2 contained in storage S2 and S3 are calculated in some fashion (KARAKER at column 3, lines 53-63), the values u1 and u2 are **not** values of a periodical waveform at sample points. Further, in KARAKER, because the values u1 and u2 are not values of the periodical waveform, the at least two values of the periodical waveform are not assigned to terms of a trinomial recurrence formula.

Moreover, KARAKER does not disclose a trinomial. KARAKER may arguably disclose that the polynomials y_1 to y_4 stored in S4, one after the other, sequentially are called up for the purpose of multiplication with the values u_1 and u_2 (KARAKER at column 3, lines 53-63). However, KARAKER clearly fails to disclose or suggest implementing a trinomial formula. The formulae disclosed in KARAKER (Column 3, lines 42-51 in KARAKER) are as follows:

$$y_0 = -142$$

$$y_1 = u_1.y_0 2^{-14} + 2603$$

$$y_2 = u_1.y_1.2^{-14} - 21165$$

$$y_3 = y_2.2^{-1}$$

$$y_4 = u_1.y_3.2^{-14} + 25736$$

$$y = y_5 = u_2.y_4.2^{-14}$$

Thus, at best KARAKEER discloses binominal formulae (consisting of y1 and y2, y2 and y3, y3 and y4, or y4 and y5) but not a trinomial recurrence formula, which, for example, consists of $y_{[n]}$, $y_{[n+1]}$, and $y_{[n+2]}$.

Thus, KARAKER does not disclose, teach or suggest "oscillating means for computing at least two values of the periodical waveform at sample points on the basis of the feature quantity detected by the detecting means, and assigning the at least two values as initial values to terms of a trinomial recurrence formula to thereby generate the periodical waveform based on the trinomial recurrence formula."

Thus, KARAKER does not anticipate claim 1. Accordingly, withdrawal of the rejection and allowance of the claim is respectfully requested.

2. Claim 2

The Office Action alleges that KARAKER discloses that a formula, $Y_{[n+2]} = 2 \times A \cos(wt) + Y_{[n+1]} - Y_{[n]}$ is used as the recurrence formula (KARAKER at column 1, lines 60-65). However, as discussed above, KARAKER does not disclose, teach or suggest the trinomial recurrence formula, $y_{[n+2]} = 2 \times A \cos(\Omega_2) \times y_{[n+1]} - y_{[n]}$.

Thus, KARAKER does not disclose teach or suggest the recurrence formula. Therefore, KARAKER does not anticipate claim 2. Accordingly, withdrawal of the rejection and allowance of the claim is respectfully requested.

3. Claims 3-6

It is respectfully submitted that since claims 3-6 depend on claim 1, they are allowable for at least the reasons that claim 1 is allowable respectively and they are further allowable by reason of the additional limitations set forth therein. Accordingly, withdrawal of the rejection and allowance of the claims is respectfully requested.

4. Claims 7-9

As to claim 7, KARAKER does not disclose, teach or suggest that "a waveform generation step of computing at least two values of the periodical waveform at sample points on the basis of the feature quantity detected by the detecting means, and assigning the at least two values as initial values to terms of a trinomial recurrence formula to thereby generate the periodical waveform based on the trinomial recurrence formula". Therefore, claim 7 is allowable. Withdrawal of the rejection is respectfully requested.

Applicants respectfully submit that since claims 8 and 9 depend on claim 7, they are allowable for at least the reasons that claim 7 is allowable respectively and they are further allowable by reason of the additional limitations set forth therein. Accordingly, withdrawal of the rejection and allowance of the claims is respectfully requested.

5. Claims 10 and 11

Similarly to claims 1 and 7, KARAKER does not disclose, teach or suggest that "oscillating means for computing at least two values of periodical waveform at sample points on the basis of the feature quantity detected by the detecting means, and assigning the at least two values as initial values to terms of a trinomial recurrence formula to generate a periodical waveform based on the trinomial recurrence formula". Therefore, claim 10 is allowable. Withdrawal of the rejection is respectfully requested.

Applicants respectfully submit that since claim 11 depends on claim 11, claim 11 is allowable for at least the reasons that claim 10 is allowable, and it is further allowable by reason of the additional limitations set forth therein. Accordingly, withdrawal of the rejection and allowance of the claims is respectfully requested.

III. Newly Added Claims

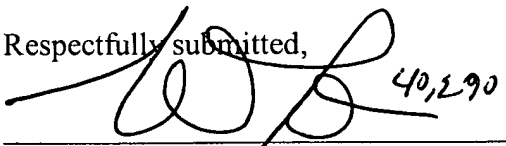
By the foregoing amendment, Applicants have added claims 12-17 in order to claim various features of the invention. Since claims 12-17 depend on the respective base claims 1, 7, and 10, they are allowable for at least same reasons that the respective base claims are allowable. Therefore, allowance of the claims is respectfully requested.

IV. Conclusion

In view of the following arguments, all claims are believed to be in condition for allowance over the prior art of record. Therefore, this response is believed to be a complete response to the Office Action. However, Applicants reserve the right to set forth further arguments supporting the patentability of their claims, including the separate patentability of the dependent claims not explicitly addressed herein, in future papers. Further, for any instances in which the Examiner took Official Notice in the Office Action, Applicants expressly do not acquiesce to the taking of Official Notice, and respectfully request that the Examiner provide an affidavit to support the Official Notice taken in the next Office Action, as required by 37 CFR 1.104(d)(2) and MPEP § 2144.03.Applicants believe no fee is due with this response. However, if a fee is due, please charge our Deposit Account No. 18-0013, under Order No. SON-2784 from which the undersigned is authorized to draw.

Dated: February 7, 2008

Respectfully submitted,

By 
40,290

Christopher M. Tobin, Reg. #40,290

Toshikatsu Imaizumi, Reg. #61,648
RADER, FISHMAN & GRAUER PLLC
Correspondence Customer Number: 23353
Attorney for Applicants

Attachments: Replacement Sheet

REPLACEMENT SHEET